

SN 09/298,297
Docket No. S-91,723
In Response to Office Action dated May 25, 2005

REMARKS

Applicant appreciates the courtesy shown by the Office, as evidenced by the Final Office Action mailed on May 25, 2005. In that Office Action, the Examiner rejected Claims 1-26. Claims 9 and 24 have been canceled and new Claims 26-30 have been added. As such Claims 1-8, 10-23, and 25-30 remain in the case with none of the claims being allowed.

Applicant further appreciates the courtesy shown by the Examiner in the August 31, 2005, telephone interview with Applicant's counsel. In that interview, the rejection of Claim 1 under 35 U.S.C. §102(b) as being anticipated by Toshiba (EP 0 482 920 A2) was discussed. The contents of that interview are reflected in the remarks presented herein.

The May 25 Final Office Action and August 31 interview have been carefully considered. After such consideration, Claims 1 and 14 have been amended, Claims 9 and 24 have been canceled, new Claims 26-30, which claim particular embodiments of the present invention, have been added, and a Request for Continuing Examination (RCE) is submitted herewith. Applicant respectfully requests reconsideration of the application in light of the accompanying amendments and remarks presented herein.

Claims 14-26 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner states that the term "the nonlinear optical material" on line 7 of Claim 14 lacks proper antecedent basis. Applicant submits that Claim 14 has been amended by replacing "the nonlinear optical material" with "the transparent spacer layer," thereby providing proper antecedent basis. By so amending Claim 14, the rejection of Claims 14-26 under 35 U.S.C. 112, second paragraph, is successfully overcome.

Claims 1, 9, 14, and 24 have been rejected under 35 U.S.C. §102(b) as being anticipated by Toshiba (EP 0 482 920 A2).

In order to anticipate under §102, a reference must teach each and every aspect of the claimed invention. Accordingly, Applicant submits that Toshiba does not teach all of the elements of the above-referenced claims, as amended.

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Applicant submits that independent Claims 1 and 14 have each been amended to recite a method of generating a material in which the donor layer is deposited directly onto a substrate consisting of a non-conductive glass. Claim 1 has also been amended to recite the limitations that the nonlinear optical material is deposited directly on the donor layer and that the acceptor layer is deposited directly on the nonlinear optical material. In addition, Claim 14 has been amended to recited the limitation that the transparent spacer layer is deposited directly on the donor layer. Support for these amendments is found on pages 7-12 of the specification, and in Figures 1, 3, and 5 of the application.

Applicant submits that, as discussed in the August 31 interview, Toshiba does not teach the deposition of the donor layer directly on a non-conductive glass substrate. Instead, in Figure 50, the reference teaches the deposition of donor layer D on an acceptor layer A, which in turn is deposited upon multiple repeating cycles of donor, nonlinear optical material, and acceptor layers.

Applicant further submits that Toshiba does not teach depositing either the nonlinear optical material or transparent spacer layer directly on the donor layer, or depositing the acceptor layer directly on the nonlinear optical material. Instead, the reference teaches the deposition of a nonlinear optical layer on an acceptor layer and deposition of the acceptor layer on either a SiO₂ film 3 backed with a conductive ITO electrode 13, or upon a donor layer. See page 22, lines 30-49, and Figures 1 and 50 of the reference.

Applicant therefore submits that, because the reference fails to teach every limitation of amended Claims 1 and 14, the rejection of these claims and the claims dependent thereon under 35 U.S.C. §102(b) as being anticipated by Toshiba is successfully overcome.

Claims 14, 15, and 24 have been rejected under 35 U.S.C. §102(b) as being anticipated by Schrepp et al. (U.S. Patent 5,294,402).

Applicant submits that Schrepp et al. does not teach all of the limitations of Claim 14, and, by reference, dependent Claims 15 and 24. Namely, the reference does not teach the deposition of the donor layer directly on a non-conductive glass substrate. Instead, Schrepp et al. teach the deposition of a donor layer on quartz lamellae that

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were rendered water repellant with dimethyldichlorosilane. See column 11, lines 31-33, of the reference. Applicant submits that, because the reference does not teach all of the limitations of amended independent Claim 14, the rejection of the claim and the claims dependent thereon under 35 U.S.C. §102(b) as being anticipated by Schrepp et al. is therefore successfully overcome.

Claims 1-3, 5-16, and 18-26 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Toshiba in view of Thompson et al., and in further view of Roberts et al. (US H2046), Lvov et al. ("Non-linear optical effects..."), Branch et al. (U.S. Patent 5,741,442), and Yu et al. (U.S. Patent 6,441,395 B1).

Applicant submits that, in order to establish a *prima facie* case of obviousness, the combination of references cited by the Examiner must either teach or suggest all of the limitations of the claimed invention. As previously presented, Toshiba neither teaches nor suggests the deposition of the donor layer directly on a non-conductive glass substrate, the deposition of a nonlinear optical material directly upon the donor layer, the deposition of an acceptor layer directly upon the nonlinear optical material, or the deposition of a transparent spacer layer directly on a donor layer. Applicant further submits that other references cited by the Examiner as well do not teach these limitations. Applicant therefore submits that, because the combination of references neither teaches nor suggests all of the limitations of amended independent Claims 1 and 14, the rejection of these claims and the claims dependent thereon under 35 U.S.C. §103(a) as being unpatentable over Toshiba in view of Thompson et al., and in further view of Roberts et al., Lvov et al., Branch et al., and Yu et al. is successfully overcome.

Claims 4 and 17 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Toshiba in view of Thompson et al., and in further view of Roberts et al., Lvov et al., Branch et al., and Yu et al., and in further view of Jacobson et al. (U.S. Patent 6,445,489 B1).

Claims 4 and 17 depend from independent Claims 1 and 14, respectively, and thus incorporate by reference all of the limitations of these base claims. As previously presented, neither Toshiba, nor Thompson et al., nor Roberts et al., nor Lvov et al., nor Branch et al., nor Yu et al. teaches nor suggests the deposition of the donor layer

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directly on a non-conductive glass substrate, the deposition of a nonlinear optical material directly upon the donor layer, the deposition of an acceptor layer directly upon the nonlinear optical material, or the deposition of a transparent spacer layer directly on a donor layer. Applicant submits that Jacobson et al. is silent as well with respect to these limitations. Applicant therefore submits that, because the combination of references neither teaches nor suggests all of the limitations of Claims 4 and 17, the rejection of these claims under 35 U.S.C. §103(a) as being unpatentable over Toshiba in view of Thompson et al., and in further view of Roberts et al., Lvov et al., Branch et al., and Yu et al., and in further view of Jacobson et al. is successfully overcome.

In light of the amendment and remarks presented herein, Applicant submits that the case is in condition for immediate allowance and respectfully requests such action. If, however, any issues remain unresolved, the Examiner is invited to telephone the Applicant's counsel at the number provided below.

Respectfully submitted,

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9/6/05
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